

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Claim 1-A

A method of converting signals from binary coded decimal into binary comprising the steps of:

- a. storing the binary coded decimal signals in a register;
- b. shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register;
- c. masking out said binary '1' in said second position of said register;
- d. adding a binary '1' to the first position of said register;
- e. shifting the signals to the left by two positions;
- f. adding a '1' to said first position; and
- g. shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: BENSON Claim 1 (Modified)****Table for Claim 1-A**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 3
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 4

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table Notes for Claim 1-A

Note 1: Disclosed invention controls speed of a train.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Step a. is a mere data-gathering step for the mathematical operation of steps b. through g. It does not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).

Note 4: Claimed invention is not limited to a practical application. Steps b. through g. are a sequence of mathematical operations for converting BCD into binary. As noted above, step a. is a mere data-gathering step. Viewed as a whole, the claimed invention merely converts one set of numbers into another set of numbers. *See* Guidelines, Section IV.B.2(c) and (d). The claim should be rejected under 35 U.S.C. § 101.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Claim 1-B

A method of converting signals from binary coded decimal into binary for converting numerical information in a general purpose computer comprising the steps of:

- a. storing the binary coded decimal signals in a reentrant shiftregister;
- b. shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register;
- c. masking out said binary '1' in said second position of said register;
- d. adding a binary '1' to the first position of said register;
- e. shifting the signals to the left by two positions;
- f. adding a '1' to said first position;
- g. shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register; and
- h. outputting the reentrant shift result

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: BENSON Claim 1 (Modified)****Table for Claim 1-B**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	Note 3
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 5

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table Notes for Claim 1-B

Note 1: Disclosed invention controls speed of a train.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Step h. merely conveys the direct result of the computer operation of steps a. through g. *See* Guidelines, Section IV.B.2(d)(iii).

Note 4: Step a. is a mere data-gathering step for the mathematical operation of steps b. through g. It does not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).

Note 5: Claimed invention *still* merely converts one set of numbers into another set of numbers. The preamble language is a statement of intended use that does not limit the claim to the practical application of converting numerical information in a general purpose computer system *See* Guidelines, Section IV.B.2(d)(i). The claim should be rejected under 35 U.S.C. § 101.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Claim 1-C

A method of controlling the speed of a train comprising the steps of:

- a. converting a binary coded decimal signal representing the speed of the train to a binary signal by:
 1. storing the binary coded decimal signals in a reentrant shiftregister,
 2. shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,
 3. masking out said binary '1' in said second position of said register,
 4. adding a binary '1' to the first position of said register,
 5. shifting the signals to the left by two positions,
 6. adding a '1' to said first position,
 7. shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register; and
- b. applying the binary signal from the reentrant shiftregister to a digital controller and
- c. controlling the train speed throttle

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table for Claim 1-C

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	YES	GoTo: END	Note 3
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table Notes for Claim 1-C

Note 1: Disclosed invention controls speed of a train.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: The transformation occurs when the speed of the train is controlled *See* Guidelines, Section IV.B.2(b).

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Claim 1-D

A method of controlling the speed of a train comprising the steps of:

- a. sensing the speed of a train
- b. producing a binary coded decimal signal representing the speed of the train
- c. converting the binary coded decimal signal to a binary signal by:
 1. storing the binary coded decimal signals in a reentrant shiftregister,
 2. shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,
 3. masking out said binary '1' in said second position of said register,
 4. adding a binary '1' to the first position of said register,
 5. shifting the signals to the left by two positions,
 6. adding a '1' to said first position,
 7. shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register; and
- d. outputting the binary signal from the reentrant shiftregister to control the speed of the train

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: BENSON Claim 1 (Modified)****Table for Claim 1-D**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	?	GoTo: Q.12b	Note 3
	Q.12b. Does process have pre-computer process activity?	YES	GoTo: END	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table Notes for Claim 1-D

Note 1: Disclosed invention controls speed of a train.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Step d. is ambiguous. It is unclear whether step d. controls the speed of the train or merely sets up the computer system for controlling the speed of the train at some subsequent step in the process. Thus, step d. does not *clearly* recite post-computer process activity.

Note 4: The transformation occurs when the speed of the train is sensed and a BCD electrical signal is produced. *See* Guidelines, Section IV.B.2(b).

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Claim 1-E

A method of providing an interface between a data entry keyboard and a general purpose digital computer comprising the steps of:

- a. inputting data on the data entry keyboard
- b. converting the binary coded decimal signal to a binary signal by:
 - 1. storing the binary coded decimal signals in a reentrant shiftregister,
 - 2. shifting the signals to the right by at least three places, until there is a binary '1' in the second position of said register,
 - 3. masking out said binary '1' in said second position of said register,
 - 4. adding a binary '1' to the first position of said register,
 - 5. shifting the signals to the left by two positions,
 - 6. adding a '1' to said first position,
 - 7. shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of said register, and
- c. outputting the reentrant shiftregister result to the general purpose digital computer

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: BENSON Claim 1 (Modified)****Table for Claim 1-E**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo:	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	NO	GoTo:	Note 3

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: BENSON Claim 1 (Modified)

Table Notes for Claim 1-E

Note 1: Disclosed invention controls speed of a train.

Note 2: Disclosed invention uses general purpose computer system.

Note 3: Claimed invention is limited to the practical application of providing an interface between a keyboard and a general purpose digital computer. The claimed invention is more than converting one set of numbers to another, BCD to binary.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Claim 1-A

A method for generating a data structure which represents the shape of a physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of:

- a. first locating the medial axis of the object; and
- b. then creating a hierarchy of bubbles on the medial axis.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: WARMERDAM Claim 1 (Modified)****Table for Claim 1-A**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	Note 3
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	YES	GoTo: END	Note 4
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Table Notes for Claim 1-A

Note 1: Disclosed invention controls robotic arm to avoid collisions.

Note 2: Disclosed invention uses computer system.

Note 3: Whether the claimed steps of the process are to be performed on a computer will not be dispositive of whether the claimed invention is statutory. Determining whether the claimed invention is statutory will be decided in the steps below; i.e. boxes 12 and 13. The Examiner must continue the analysis.

Note that although the claim does not recite the computer, the disclosure indicates that the claimed steps are to be performed on a computer. This computer-implementation is the sole disclosed embodiment of the invention.

Note 4: Claimed invention is not limited to a practical application. Viewed as a whole, the claimed invention is the abstract idea of representing a physical object as a data structure in the form of a bubble hierarchy. *See* Guidelines, Section IV.B.2(c) and (d).

Also, note that the claim is not limited to a computer-implementation of the recited method. Although the disclosure provides for such implementation, it is improper to import the disclosed limitation into the claim. A broadest reasonable interpretation of the claim would include a non-computer-implementation of the recited method. The claim, unless otherwise in the technological arts, must fail at box 13 because the invention as claimed, can not be limited to apragmatic application in the technological arts. *See In re Musgrave*, 167 U.S.P.Q. 280 (C.C.P.A. 1970). (Issue is not whether some or all of the claimed steps can be carried out in or with the aid of the human mind; all that is necessary to make a sequence of operational steps a statutory process is that the claimed invention is in the technological arts.) The claim should be rejected under 35. U.S.C. 101.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Claim 1-B

A method for generating a data structure which represents the shape of a physical object to be encountered by a robotic arm and end effector in a position and/or motion control machine as a hierarchy of bubbles for defining a collision avoidance work area, comprising the steps of:

- a. first locating the medial axis of the object; and
- b. then creating a hierarchy of bubbles on the medial axis.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: WARMERDAM Claim 1 (Modified)****Table for Claim 1-B**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	Note 3
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	YES	GoTo: END	Note 4
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Table Notes for Claim 1-B

Note 1: Disclosed invention controls robotic arm to avoid collisions.

Note 2: Disclosed invention uses computer system.

Note 3: Whether the claimed steps of the process are to be performed on a computer will not be dispositive of whether the claimed invention is statutory. Determining whether the claimed invention is statutory will be decided in the steps below; i.e. boxes 12 and 13. The Examiner must continue the analysis.

Note that although the claim does not recite the computer, the disclosure indicates that the claimed steps are to be performed on a computer. This computer-implementation is the sole disclosed embodiment of the invention.

Note 4: Claimed invention is *still* the abstract idea of representing a physical object as a data structure in the form of a bubble hierarchy. The preamble language is a statement of intended use that does not limit the claim to the practical application of defining a collision avoidance work area for a robotic arm and end effector. *See* Guidelines, Section IV.B.2(d)(i). The claim should be rejected under 35 U.S.C. § 101.

Also, note that the claim is not limited to a computer-implementation of the recited method. Although the disclosure provides for such implementation, it is improper to import the disclosed limitation into the claim. A broadest reasonable interpretation of the claim would include a non-computer-implementation of the recited method. The claim, unless otherwise in the technological arts, must fail at box 13 because the invention as claimed, can not be limited to a practical application in the technological arts See

In re Musgrave, 167 U.S.P.Q. 280 (C.C.P.A. 1970). (Issue is not whether some or all of the claimed steps can be carried out in or with the aid of the human mind; all that is necessary to make a sequence of operational steps a statutory process is that the claimed invention is in the technological arts.) The claim should be rejected under 35. U.S.C. § 101.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Claim 1-C

A method of controlling a robotic arm and end effector to avoid potential collisions in a work area defining a series of bubbles comprising the steps of:

- a. generating a data structure which represents the shape of a physical object to be encountered by the robotic arm and end effector in a position and/or motion control machine as a hierarchy of bubbles by:
 1. first locating the medial axis of the object and,
 2. then creating a hierarchy of bubble on the medial axis;
- b. storing the data structure on a general purpose computer system
- c. determining the minimal collision free bubble in the work area employing a bubble bursting technique; and
- d. controlling the movements of the robotic arm and end effector based upon the result of the bubble bursting technique

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim 1 (Modified)

Table for Claim 1-C

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	YES	GoTo: END	Note 3
	Q.12b. Does process have pre-computer process activity?		GoTo:	
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?		GoTo:	
	Q.13b. Does process solve math problem w/o limitation to a practical application?		GoTo:	

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: WARMERDAM Claim (Modified)

Table Notes for Claim 1-C

- Note 1: Disclosed invention controls robotic arm to avoid collisions.
- Note 2: Disclosed invention uses computer system.
- Note 3: The transformation occurs with the movement of the robotic arm based on the result of the bubble bursting technique. *See* Guidelines, Section IV.B.2(b).
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Claim 1-A

A method of competitively bidding on a plurality of items comprising the steps of:

- a. identifying a plurality of related items in a record;
- b. offering said plurality of items to a plurality of potential bidders;
- c. receiving bids from said bidders for both individual ones of said items and a plurality of groups of said items, each of said items and groups being any number of all of said individual ones and all of the possible combinations of said items;
- d. entering said bids in said record;
- e. indexing each of said bids to one of said individual ones or said groups of said items; and
- f. assembling a completion of all said bids on said items and groups, said completion identifying a bid for all of said items at a prevailing total price, identifying in said record all of said bids corresponding to said prevailing total price.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: SCHRADER Claim 1 (Modified)****Table for Claim 1-A**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	?	GoTo: Q.12a	Note 3
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 5

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Table Notes for Claim 1-A

Note 1: Disclosed invention processes bids on real property.

Note 2: Disclosed invention uses a general purpose computer.

Note 3: Without a specification, it cannot be determined whether the claimed invention is performed on a computer system. The claim must be read in light of the specification.

Whether the claimed steps of the process are to be performed on a computer will not be dispositive of whether the claimed invention is statutory. Determining whether the claimed invention is statutory will be decided in the steps below; i.e. boxes 12 and 13. The Examiner must continue the analysis.

Note 4: Steps a. through d. is a mere data-gathering steps for the mathematical operations of steps e. and f. They do not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).

Note 5: Claimed invention is not limited to a practical application. Steps e. through g. are a sequence of mathematical operations. As noted above, steps a. through d. are mere data-gathering steps. Viewed as a whole, the claimed invention merely converts one set of numbers into another set of numbers. *See* Guidelines, Section IV.B.2(c) and (d).

Also, note that the claim is not limited to a computer-implementation of the recited method. Where the disclosure indicates that the claimed steps are to be performed on a computer or that the claimed steps could be performed on a computer as one possible implementation of the invention, the claim could be recited as a computer-implemented invention. However, it would be improper to import the disclosed limitation into the claim. A broadest reasonable interpretation of the claim would include a non-computer-implementation of the recited method. The claim, unless otherwise in the technological arts, must fail at box 13 because the invention is claimed, can not be limited to a practical application in the technological arts *See In re Musgrave*, 167 U.S.P.Q. 280 (C.C.P.A. 1970). (Issue is not whether some or all of the claimed steps can be carried out in or with the aid of the human mind; all that is necessary to make a sequence of operational steps a statutory process is that the claimed invention is in the technological arts.) The claim should be rejected under 35. U.S.C. § 101.

Finally, if the disclosure does not include computer implementation, the claimed invention, unless otherwise in the technological arts, must fail at box 13 (below); i.e. the invention can not be limited to a practical application in the technological arts. However, where the disclosure, although silent to computer-implementation, clearly supports that the invention is implemented on a computer, such disclosure is sufficient. In this circumstance the disclosure would be so clear that the inclusion/ amendment of that disclosure to recite computer implementation would not constitute new matter.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Claim 1-B

A method of competitively bidding on a plurality of ontiguous tracts of land comprising the steps of:

- a. identifying a plurality of related items in a record;
- b. offering said plurality of items to a plurality of potential bidders;
- c. receiving bids from said bidders for both individual ones of said items and a plurality of groups of said items, each of said items and groups being any number of all of said individual ones and all of the possible combinations of said items;
- d. entering said bids in said record;
- e. indexing each of said bids to one of said individual ones or said groups of said items; and
- f. assembling a completion of all said bids on said items and groups, said completion identifying a bid for all of said items at a prevailing total price, identifying in said record all of said bids corresponding to said prevailing total price.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: SCHRADER Claim 1 (Modified)****Table for Claim 1-B**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	?	GoTo: Q.12a	Note 3
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 5

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Table Notes for Claim 1-B

Note 1: Disclosed invention processes bids on real property.

Note 2: Disclosed invention uses a general purpose computer.

Note 3: Without a specification, it cannot be determined whether the claimed invention is performed on a computer system. The claim must be read in light of the specification.

Whether the claimed steps of the process are to be performed on a computer will not be dispositive of whether the claimed invention is statutory. Determining whether the claimed invention is statutory will be decided in the steps below; i.e. boxes 12 and 13. The Examiner must continue the analysis.

Note 4: Steps a. through d. is a mere data-gathering steps for the mathematical operations of steps e. and f. They do not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).

Note 5: Claimed invention *still* merely converts one set of numbers into another set of numbers. The preamble language is a statement of intended use that does not limit the claim to the practical application of bidding on contiguous tracts of land. *See* Guidelines, Section IV.B.2(d)(i).

Also, note that the claim is not limited to a computer-implementation of the recited method. Where the disclosure indicates that the claimed steps are to be performed on a computer or that the claimed steps could be performed on a computer as one possible implementation of the invention, the claim could be recited as a computer-implemented invention. However, it would be improper to import the disclosed limitation into the claim. A broadest reasonable interpretation of the claim would include a non-computer-implementation of the recited method. The claim must fail at box 13 because the invention, as claimed, can not be limited to a practical application in the technological arts. *See In re Musgrave*, 167 U.S.P.Q. 280 (C.C.P.A. 1970). (Issue is not whether some or all of the claimed steps can be carried out in or with the aid of the human mind; all that is necessary to make a sequence of operational steps a statutory process is that the claimed invention is in the technological arts.) The claim should be rejected under 35. U.S.C. 101.

Finally, if the disclosure does not include computer implementation, the claimed invention, unless otherwise in the technological arts, must fail at box 13 (below); i.e. the invention can not be limited to a practical application in the technological arts. However, where the disclosure, although silent to computer-implementation, clearly supports that the invention is implemented on a computer, such disclosure is sufficient. In this circumstance the disclosure would be so clear that the inclusion/ amendment of that disclosure to recite computer implementation would not constitute new matter.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Claim 1-C

A method of competitively bidding on a plurality of ~~related~~ parcels of real property comprising the steps of:

- a. identifying a plurality of ~~related~~ parcels of real property in a record on a computer system
- b. offering said plurality of ~~related~~ parcels of real property to a plurality of potential bidders;
- c. receiving bids from said bidders for both individual ones of said ~~related~~ parcels of real property and a plurality of groups of said ~~related~~ parcels of real property, each of said groups including one or more of said ~~related~~ parcels of real property, said ~~related~~ parcels of real property and groups being any number of all of said individual ones and all of the possible combinations of said ~~related~~ parcels of real property;
- d. entering said bids in said record on said ~~computer system~~
- e. indexing each of said bids to one of said individual ones or said groups of said ~~related~~ parcels of real property; and
- f. assembling a completion of all said bids on said ~~related~~ parcels of real property and groups in order to determine the maximum profit to be realized from the sales of said related parcels of real property, said completion identifying a bid for all of said ~~related~~ parcels of real property at a prevailing total price, identifying in said record on said ~~computer system~~ all of said bids corresponding to said prevailing total price.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: SCHRADER Claim 1 (Modified)****Table for Claim 1-C**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	Note 3
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	NO	GoTo: Q.12b	
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	YES	GoTo: END	Note 5

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Table Notes for Claim 1-C

- Note 1: Disclosed invention processes bids on real property.
- Note 2: Disclosed invention uses a general purpose computer.
- Note 3: A reasonable interpretation of the claim is that the steps are to be performed on a computer. However, whether the claimed steps of the process are to be performed on a computer will not be dispositive of whether the claimed invention is statutory. Determining whether the claimed invention is statutory will be decided in the steps below; i.e. boxes 12 and 13. The Examiner must continue the analysis.
- Note 4: Steps a. through d. is a mere data-gathering step for the mathematical operations of steps e. and f. They do not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).
- Note 5: Claimed invention *still* merely converts one set of numbers into another set of numbers. The claimed invention does not impart any *function* to a real estate bid system, *i.e.*, the claim is not applied. Instead, the claimed invention merely *describes* the use of the mathematical operations in the real estate bid system. *See* Guidelines, Section IV.B.2(c) and (d). The claim should be rejected under 35 U.S.C. § 101.

NOTE: Because the claimed invention is directed solely to a process for solving a mathematical algorithm, in addition to performing the above analysis the Freeman-Walter-Abele test may also be relied upon to verify that the claim defines non-statutory subject matter.
THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Claim 1-D

A method of competitively bidding on a plurality of related parcels of real property comprising the steps of:

- a. identifying a plurality of related parcels of real property in a record on a computer system;
- b. offering said plurality of related parcels of real property to a plurality of potential bidders;
- c. receiving bids from said bidders for both individual ones of said related parcels of real property and a plurality of groups of said related parcels of real property, each of said groups including one or more of said related parcels of real property, said related parcels of real property and groups being any number of all of said individual ones and all of the possible combinations of said related parcels of real property;
- d. entering said bids in said record on said computer system;
- e. indexing each of said bids to one of said individual ones or said groups of said related parcels of real property;
- f. assembling a completion of all said bids on said related parcels of real property and groups in order to determine the maximum profit to be realized from the sales of said related parcels of real property, said completion identifying a bid for all of said related parcels of real property at a prevailing total price, identifying in said record on said computer system all of said bids corresponding to said prevailing total price; and
- g. displaying the winning combination of bids for the bidders whose bids represent a maximum of profit relative to all other submitted bids and said computer system simultaneously accepting the corresponding bids by sending an acceptance control signal to the identified bidders

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS**Example: SCHRADER Claim 1 (Modified)****Table for Claim 1-D**

BOX 2	Q.2a. Does disclosed invention have practical application?	YES	GoTo: Q.2b	Note 1
	Q.2b. Is disclosed invention in technological arts?	YES	GoTo: Q.6a	Note 2
BOX 6	Q.6a. Is claimed invention a computer program <i>per se</i> ?	NO	GoTo: Q.6b	
	Q.6b. Is claimed invention a data structure <i>per se</i> ?	NO	GoTo: Q.6c	
	Q.6c. Is claimed invention non-functional descriptive material?	NO	GoTo: Q.6d	
	Q.6d. Is claimed invention a natural phenomenon?	NO	GoTo: Q.8	
BOX 8	Q.8. Is claimed invention a series of steps to be performed on a computer?	YES	GoTo: Q.12a	
BOX 9	Q.9. Is claimed invention a product for performing a process?		GoTo:	
BOX 10	Q.10. Is claimed invention a specific machine or manufacture?		GoTo:	
BOX 12	Q.12a. Does process have post-computer process activity?	?	GoTo: END	Note 3
	Q.12b. Does process have pre-computer process activity?	NO	GoTo: Q.13a	Note 4
BOX 13	Q.13a. Does process manipulate abstract idea w/o limitation to a practical application?	NO	GoTo: Q.13b	
	Q.13b. Does process solve math problem w/o limitation to a practical application?	NO	GoTo: END	Note 5

EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS

Example: SCHRADER Claim 1 (Modified)

Table Notes for Claim 1-D

- Note 1: Disclosed invention processes bids on real property.
- Note 2: Disclosed invention uses a general purpose computer.
- Note 3: Step g. is ambiguous. It is unclear whether step h. contacts the identified bidders or merely sets up the computer system for contacting the identified bidders at some subsequent step in the process. Thus, step h. does not *clearly* recite post-computer process activity.
- Note 4: Steps a. through d. are mere data-gathering steps for the mathematical operations of steps e and f. They do not measure physical objects or activities. *See* Guidelines, Section IV.B.2(d)(ii).
- Note 5: Claimed invention is limited to practical application of displaying correlated bid information and controlling and accepting bids on real estate parcels. Step g recites more than a numerical output as a result of the calculations done in steps e and f. The output functionally correlates information into a result which is more than the mere solution of the algorithm and which exhibits a practical application of evaluating bids.

THE REMAINDER OF THE EXAMINATION MUST BE COMPLETED.